No.



200000191

THE UNITED STATES OF ANTERIOA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Western Plant Breeders, Inc.

There has been presented to the

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE HIT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR WING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEO.)

WHEAT, COMMON

'Hank'

In Institute Mercest, I have hereunto set my hand and caused the seal of the Mant Inviety Frotestian Office to be affixed at the City of Washington, D.C. this eighth day of May, in the year of our Lord two thousand one.

Atlast:

alank Post

Scling Commissioner
Plant Variety Protection Office

kgriculture

(See reverse for instructions and information collection burden statement)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

Application is required in order to determine if a plant variety protection certificate is to be issued
(7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

LT-470 (6-98) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STO-470 (03-96) which is obsolete.

The following state ments are made in accordance with the Privacy Act of 1974 (5 U.S.C, 552a) and the Paperwork Reduction Act (PRA) of 1995.

(Instructions and information	collection burden statement	on reverse				
1 NAME OF OWNER			2. TEMPORARY DESIGNATION OR S. VARIETY NAME EXPERIMENTAL NAME			
Western Plant Breeders, Inc.				BZ 992-322		Hank
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)				5. TELEPHONE (include are	a code)	FOR OFFICIAL USE ONLY
8111 Timberline				406-587-1218	3	PVPO NUMBER
Bozeman, MT 597	18			6. FAX (include area code)		0000019
				406-586-824	7	FILING DATE
7. IF THE OWNER NAMED IS NOT A "PERS' ORGANIZATION (corporation, partnership,		8. IF INCO	RPORATED, GIVE OF INCORPORATION	9. DATE OF INCORPORATION		
Corporation		Ariz	ona	Aug. 24, 1990 MARCH 14, 20		
10. NAME AND ADDRESS OF OWNER REP	RESENTATIVE(S) TO SERVE IN THI	IS APPLICATION	N. (First person listed will red	ceive all papers)		FILING AND EXAMINATION FEES:
Dr. Dale R. Clar Western Plant Br 8111 Timberline Bozeman, MT 597	eeders, Inc. Drive					E : 2450. C R DATE 3-14-2000 CERTIFICATION FEE: 0 DATE 4/30/0/
11. TELEPHONE (Include area code)	12. FAX (Include area code)		13. E_MAIL		14. CROP	KIND (Common Name)
406-587-1218	406-587-1218 406-586-8247 dc				whea	at
15 GENUS AND SPECIES NAME OF CROP			16. FAMILY NAME (Botanic	30tanical) 17. IS THE VARIETY A FIRST GENERATION HYBRID?		
Triticum asetivum	<u>m</u> .		Poaceae	ceae 🔲 🗖 YES 💢 NO		
18. CHECK APPROPRIATE BOX FOR EACH reverse) a. Exhibit A. Origin and Breeding b. Exhibit B. Statement of Distinct	History of the Variety	instructions or	CERTIFIED	SEED? See Section 83(a) of YES (If 'yes', answer items 20 and 21 below)	(the Plant Va	NO (If "no," go to item 22)
c. Exhibit C. Objective Description d. Exhibit D. Additional Description e. Exhibit E. Statement of the Bas	OF GENERA	DES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER GENERATIONS? NO NO				
Voucher Sample (2,500 viable or verification that lissue culture wire repository) Fiting and Examination Fee (\$2, Stales" (Mail to the Plant Variety)		S" TO ITEM 20, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? FOUNDATION				
22. HAS THE VARIETY (INCLUDING ANY HA FROM THIS VARIETY BEEN SOLD, DISP OTHER COUNTRIES? IF YES IF YES, YOU MUST PROVIDE THE DATE FOR EACH COUNTRY AND THE CIRCU	S. OR PROPERTY	ETY OR ANY COMPONENT OF RIGHT (PLANT BREEDER'S RI YES USE GIVE COUNTRY, DATE OF INUMBER. (Please use space:	GHT OR PAT	NO ISSUANCE AND ASSIGNED		
24. The owners declare that a viable sample of for a tuber propagated variety a tissue cut. The undersigned owner(s) is(are) the owner and is entitled to protection under the provious of th	ure wif be deposited in a public repo er of this sexually reproduced or tube isions of Section 42 of the Plant Varia	r propagated party Protection /	ntained for the duration of the plant variety, and believe(s) (f Act.	e certificate.		•
SIGNATURE OF OWNER			SIGNATURE OF	OWNER Bidderson	4//	' 5
NAME (Please print or type)			NAME (Please p	rint of types	M	
Dale R. Clark				. Biggerstaf	f	
CAPACITY OR TITLE DATE			CAPACITY OR T	DATE DATE		
Barlev and Wheat	oon v P//G	eneral Manag	er	March 13, 2000		

"HANK"

Hard Red Spring Wheat

16.a. Exhibit A. Origin and Breeding History

"Hank" (Exp. # BZ 992-322) is a hard red spring wheat that originated from the cross of "WestBred 926 x WestBred 936", made near Phoenix, AZ in March 1991. The F1 plants were grown near Bozeman, MT during the summer of 1991 and the F2 seed harvested in September 1991. The F2 seed was planted near Phoenix in Nov. 1991 and single F2 heads were harvested in late April 1992. F3 head rows were planted in May 1992 near Bozeman. Agronomically acceptable F3 rows were selected and this particular row was given the designation BZ 992-322. Protein and protein quality (the SDS sedimentation test) analysis for bread wheat type quality were conducted on selected lines prior to advancing to yield trials. Yield trials, along with quality analysis, were conducted on the F4 thru F8 generations in Western Plant Breeders' Pacific Northwest spring wheat trials. Besides being selected for high protein, high sedimentation levels, strong bread mixing characteristics (Table 2.) and high yield, Hank was also evaluated and selected for suitable agronomic characteristics (see Table 1.) such as disease resistance (leaf rust, stripe rust and mildew), plant height and resistance to lodging.

Heads were selected from the F4 plot in the fall of 1993 and planted as head rows near Bozeman in the spring of 1994. Uniform head rows were individually harvested and tested for quality. Uniform selections were planted as individual 5' x 20' F5 plots in the spring of 1995 and uniform lines harvested individually in the fall. Selected lines were planted in larger F6 plots in the spring of 1996. Also each line was planted in a single row near Walla Walla, Washington to screen for resistance to the prevalent races of the Hessian fly. One line, designated BZ 992-322-c had the best resistance. This line was harvested from the purifications near Bozeman in the fall of 1996. A larger F7 increase of this line was planted near Bozeman in the spring of 1997. Seed of this line was harvested in the fall and planted near El Centro, CA in November 1997. Seed of this production was harvested in April 1998 and designated "Breeders" seed. This seed was used to plant approximately 20 acres near Bozeman in May 1998. This production was harvested in the fall of 1998 and designated "Foundation" seed. Foundation seed was planted in the spring of 1999 to produce Registered and Certified seed. Certified seed will first be available to growers in the spring of 2000.



"HANK"

Hard Red Spring Wheat

A variant that is similar to "Hank", but is 4 to 8 inches taller, occurs at a frequency of up to .08% (8 per 10,000 plants). Otherwise, "Hank" is a stable and uniform variety in appearance and performance across several generations (F4 to F10) and growing conditions.

16.b. Exhibit B. Statement of Distinctness

Hank is most similar to the variety WestBred 936. However, Hank is resistant to the prevalent biotypes of Hessian fly in the State of Washington while WestBred 936 is susceptible. Also, the glume shoulders of Hank are rounded, whereas those of WestBred 936 are elevated. And, the seed of Hank is elliptical in shape whereas the seed of WestBred 936 is ovate.

The above comparison, along with the complete Objective Description (Exhibit C) shows Hank to be a novel variety of hard red spring wheat.

Table 1. Agronomic characteristics of Hank compared to check varieties in Western Plant Breeders' trials 1996-1999 (avg. of 15 locations).

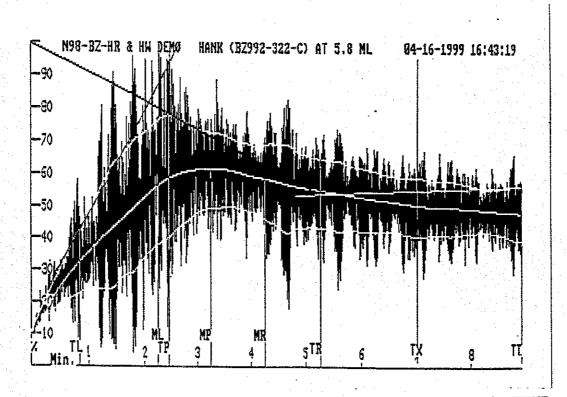
Entry	Heading* Date	Plt. Ht.	T.W.	Protein	SED	4yr avg
Hank	from 7/1 2	(inches) 34	(lbs/bu) 60.1	% 13.6	(mm) 123	<u>bu/ac</u> 105
Pristine	3	35	62.5	13.7	124	101
WB 926	3	35	60.3	13.8	123	100
WB 936	3	32	59.7	13.9	129	101
Express	7	32	60.5	13.9	115	102

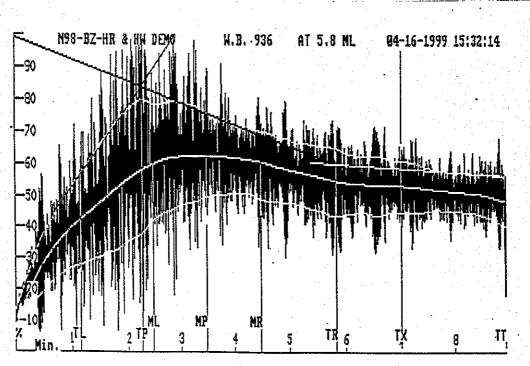


"HANK"

Hard Red Spring Wheat

Table 2. Quality (mixograph) characteristics of Hank compared to WestBred 936 in Western Plant Breeders' trials - 1998.





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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY PLANT VARIETY PROTECTION OFFICE BELTSVILLE, MD 20705

EXHIBIT C (Wheat)

OBJECTIVE DESCRIPTION OF VARIETY WHEAT (Triticum spp.)

NA	ME OF APPLICANT(S)		· · · · · · · · · · · · · · · · · · ·		FOR OFFICIAL USE ON	TLY	· · · · · ·
		estern Plant Bre	eders, Inc.		PVPO NUMBER	*	- Pro-
ADI	RESS (Street and No. or I	RD No., City, State, and Zip Code)		-	20(<u> </u>	191
	8111 Timbe	erline Drive			VARIETY NAME		
	Bozeman, I	and the second of the second o			Ha	ink	
	•				TEMPORARY OR EXPE	RIMENTAL DESIG	NATION
a mi	inimum of 100 plants be used to determin	INSTRUCTIONS CAREFULLY: DOX (e.g. 0 9 9 or 0 9) wh Comparative data should be dete e plant colors; designate system use ons for your variety; lack of response	en number is either 99 or less o emined from varieties entered : d:	or 9 or less respectively. It in the same trial. Royal H	Tata for anantitative al	ant choroaters al	and d La Land an
	KIND:				<u> </u>		
, i		1=Common	2=Durum	3=Club	4=01	ther (SPEC)	FY):
2.	VERNALIZAT	ION:			<u> </u>		
		1=Spring	2=Winter	3=Other (SP	ECIFY) :		
3. (COLEOPTILE	ANTHOCYANIN:					
		1=Absent	2=Present			- -	
4	UVENILE PLA	ANT GROWTH:					
	3	1=Prostrate	2=Semi-erect	3=Erect	•	•	
5. I	PLANT COLOR	R (boot stage):		· · · · · · · · · · · · · · · · · · ·			
•	2	1 = Yellow-Green	2 = Green	3 = Blue-Gree	en .		
6. F	LAG LEAF (b	oot stage):					· · · · · · · · · · · · · · · · · · ·
	2	1 = Erect	2 = Recurved	2	1 = Not Twist	ed 2=1	wisted
7. E	AR EMERGE	VCE:			· · · · · · · · · · · · · · · · · · ·		
	05	Number of Days Earli	er Than Expres	<u>s</u>			•
	01	Number of Days Later	- ·				<u> </u>

8. ANTHER COLOR:	
1 = Yellow 2 = Purple	
9. PLANT HEIGHT (from soil to top of head, excluding awns):	
05 cm Taller Than Express	<u> </u>
25 cm Shorter Than Sharpshooter	•
	* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial
10. STEM:	
A. ANTHOCYANIN	D. INTERNODE (SPECIFY NUMBER)
1= Absent 2=Present	1= Hollow 2=Semi-solid 3=Solid
B. WAXY BLOOM	E. PEDUNCLE
	1_About 2_Puscont
2 I=Absent 2=Present	
C. HAIRINESS (last internode of rachis)	40 cm Length
2=Present	
11. HEAD (at Maturity):	
A. DENSITY	C. CURVATURE
1=Lax 2=Middense 3= Dense	2 Inclined 3 = Recurved
B. SHAPE	D. AWNEDNESS
1 = Tapering 2= Strap 3 = Clavate 4 = Other (SPECIFY):	1 = Awnless 2 = Apically Awnletted 3 = Awnletted 4 = Awned
12. GLUMES (at Maturity):	
A. COLOR	C. BEAK
1 = White 2 = Tan	3 1 = Obtuse 2 = Acute
3 = Other (SPECIFY) :	3 =Acuminate
B. SHOULDER	D. LENGTH
	Color 2 Malium
3 = Rounded 4 = Square 5 = Elevated 6 = Apiculate	3 1 = Short

12. GLUMES (at Maturity) Continued:	
E. WIDTH	
3 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm) 3 = Wide (ca. 4mm)	
13. SEED:	
A. SHAPE C.	BRUSH
3 1 = Ovate 2 = Oval 3 = Elliptical	1=Short 2=Medium 3=Long
	1 = Not Collared 2 = Collared
B. CHEEK	CREASE
1=Rounded 2=Angular	1 = Width 60% or less of Kernel 2 = Width 80% or less of Kernel 3 = Width Nearly as Wide as Kernel
[2	7 1 - D 1 200/ 1 CV
E. Color	PHENOL REACTION (see instructions):
3 1=White 2= Amber 3= Red 4= OTHER (Specify)	1 = Ivory 2 = Fawn 3 = Light Brown 4 = Dark Brown 5 = Black
F. TEXTURE 1=Hard 2=Soft	
14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant;	3=Intermediate; 4=Tolerant)
PLEASE INDICATE THE SPECIFIC R	ACE OR STRAIN TESTED
Stem Rust (Puccinia graminis f. sp. tritici)	Leaf Rust (Puccinia recondita f. sp. tritici) Prevalent in Pacific Northwest
2 Stripe Rust (Puccinia striiformis) prevalent	Loose Smut (Ustilago tritici)
Tan Spot (Pyrenophora tritici-repentis)	Flag Smut (Urocystis agropyri)
O Halo Spot (Selenophoma donacis)	Common Bunt (Tilletia tritici or T. laevis)
Septoria nodorum (Glume Blotch)	Dwarf Bunt (Tilletia controversa)
Septoria avenae (Speckled Leaf Disease)	Karnal Bunt (Tilletia indica)
Septoria tritici (Speckled Leaf Blotch) 2	Powdery Mildew (Erysiphe graminis f. sp. tritici) Prevalent in PNW
Scab (Fusarium spp.)	"Snow Molds"

14.	Disea	se (Continued)	(0=Not Tested;	1=Susceptible;	2=Resistant;	3=Intermediate;	4=Tolerant)
			PLEASE IN	DICATE THE SP	ECIFIC RACE	OR STRAIN TEST	ED
	0	"Black Point"	(Kernel Smudge)		Common Bipolaris	Root Rot (Fusarius	m, Cochliobolus and
	0	Barley Yellow	Dwarf Virus (BYD)	7)	Rhizocto	nia Root Rot <i>(Rhizo</i>	ctonia solani)
	0	Soilborne Mos	aic Virus (SBMV)	<u></u>	Black Ch	aff (Xanthomonas c	ampestris pv. translucens)
	0	Wheat Yellow	(Spindle Streak) Mo	saic Virus	Bacterial syringae)	Leaf Blight (Pseudo	omonas syringae pv.
	٥	Wheat Streak	Mosaic Virus (WSM	v) <u> </u>	Other (S	PECIFY)	
~~~ ~~*	0	Other (SPECI	FY)		Other (S	PECIFY)	
	0	Other (SPECI	FY)	0	Other (S	PECIFY)	
	0	Other (SPECI	FY)	0	Other (S	PECIFY)	
15. II	NSECT:	(0=Not Tes	ed; 1=Susceptible	; 2=Resistant;	3=Intermedi	ate; 4=Tolerant)	
			PLEASE :	SPECIFY BIOTY	PE (where need	led)	
	2		ayetiola destructor) Pacific North we	s+ ©	Other (Si	PECIFY)	
		Stem Sawfly (C	Cephus spp.)	ြ	Other (S)	PECIFY)	
	0	Cereal Leaf Bee	tle <i>(Oulema melano</i> j	pa)	Other (SI	PECIFY)	
	0	Russian Aphid	(Diuraphis noxia	• •	Other (SI	PECIFY)	
	0	Greenbug (Sch	izaphis graminum)	<u></u>	Other (SI	PECIFY)	
	0	Aphids		0	Other (SI	PECIFY)	

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE	The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995. Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).				
EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP					
1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION 3. VARIETY NAME OR EXPERIMENTAL NUMBER				
Western Plant Breeders, Inc.	BZ 992-322 Hank				
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)	5. TELEPHONE (include area code) 6. FAX (include area code)				
8111 Timberline Drive	406-587-1218 406-586-8247				
Bozeman, MT 59718	7. PVPO NUMBER 2 0 0 0 0 0 1 9 1				
8. Does the applicant own all rights to the variety? Mark an "X" in appro	priale block. If no, please explain. YES NO				
Q to the preliment findividual or correspond a U.S. delicad call C. hand					
Is the applicant (individual or company) a U.S. national or U.S. based If no, give name of country	company? YES NO				
10. Is the applicant the original owner?	NO If no, please answer one of the following:				
a. If original rights to variety were owned by individual(s), is (are) the	original owner(s) a U.S. national(s)?				
☐ YES ☐	NO If no, give name of country				
b. If original rights to variety were owned by a company(ies), is(are) the					
YES	NO If no, give name of country				
11. Additional explanation on ownership (if needed, use reverse for extra	space):				
PLEASE NOTE:					
Plant variety protection can be afforded only to owners (not licensees) who meet	one of the following criteria:				
1. If the rights to the variety are owned by the original breeder, that person must which affords similar protection to nationals of the U.S. for the same genus are					
If the rights to the variety are owned by the company which employed the original member country, or owned by nationals of a country which affords similar properties.					
3. If the applicant is an owner who is not the original owner, both the original or	wner and the applicant must meet one of the above criteria.				
The original breeder/owner may be the individual or company who directed final	breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.				
According to the Paperwork Reduction Act of 1995, no persons are required to respond to a compation collection is 0581-0055. The time required to compete this information collection is 0581-0055. The time required to compete this information collecting existing data sources, gathering and maintaining the data needed, and completing as	plication of information unless it displays a valid OMB control number. The valid OMB control number for action is estimated to average 10 minutes per response, including the time for reviewing instructions, and reviewing the collection of information.				
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USOA's TARGET Center at 202-720-2600 (voice and TDD). To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Wa employment opportunity employer.	shington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal				

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